

## ABSTRACT OF THE DISCLOSURE

A method for transmitting concatenated data signals wherein an STM-256/OC-768 signal is divided into four concatenated signals which are inserted into modified STM-64/OC-192 pulse frames. The bytes of the unused information and  
5 the frame alignment words of the STM-256/OC-768 signal are not transmitted so that the total content of the STM-256/OC-768 signal, reduced by this redundant information, can be transmitted transparently in the modified STM-64/OC-192 pulse frames. The concatenated signals can be regenerated without problems.